

**EXHIBIT C**



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To: Brian Considine, legal director of the Washington State Gambling Commission

From: Natasha Dow Schüll, Ph.D.

Re: Big Fish Games, Inc.

Since the early 1990s I have researched the design of gambling technology, including its historical evolution, current trends, and problematic consequences for players. My prize-winning 2012 book, *Addiction by Design*, details the various ways in which contemporary games, particularly the design of their mathematical algorithms, are designed to increase what they refer to as players' "time on device" (or, alternately, "continuous gaming productivity") as a way to increase their revenue.

In my capacity as a expert on gambling technology and gambling addiction, I am contributing these comments to emphasize the absurdity of any claim by Big Fish Games that its mobile slots are different in any significant or consequential way from traditional gambling machines. Especially for players vulnerable to compulsive play, the games offer an identical experience – and an identical set of associated dangers:

- First there is the simple, obvious fact that the mobile phone game presents itself to players as a slot machine, looks like a slot machine, and functions like one.
- Second is the fact that players of the mobile phone game *and* players in casinos use real money to buy virtual "chips" or credits that they can then bet for the chance to win more chips / credits (and thus to continue play – which is the main aim of the regular and the problem machine gambler). It is rare that contemporary slot machines accept coins directly; upwards of 85% of slot machine play in the US is conducted via "player cards" containing purchased credits, and much of the rest is conducted via paper tickets containing credits. *Although Big Fish Games wants legislators to view the purchase of virtual chips as a point of distinction from traditional slot machines – in fact, that is exactly how traditional slot machines are played today.*

It should also be noted that virtual chips and credits, whether they are purchased within a bricks-and-mortar casino or online, most certainly have “value,” for both parties with stakes in the activity: for players, credits are valuable because they buy more “time on device”; for purveyors, credits have value because they lead players to spend more “time on device” (and therefore, more money).

- Third, just like traditional casinos managers, staff of Big Fish Games track different player “tiers” and reach out personally to those who play at the higher tiers, often prompting them to return to play.
- Fourth, Big Fish Casino is a game that uses incentive strategies identical to those used in casinos on traditional slots – for instance, the free initial allotment of chips. *Although Big Fish Games points to free play to argue that its game is not a form of gambling like a slot machine, in fact the offering of “free play” has become a common feature of casino slot machines—because it is a proven way to further invest players in the game, increase their time on device, and thus increase game revenue over time.*
- Fifth, Big Fish Casino and games like it draw from the same repertoire of mathematical game algorithms as traditional slot machines do, including such compelling effects as “false wins” (where players are given a chance to bet on multiple lines and, when they win on only one or two of those lines, are given the audio-visual feedback of “winning” when, in fact, they have net lost – by earning back fewer chips than they bet). This mathematical design is profitable to gambling purveyors because it masks the slow erosion of player credits (money) over time, giving the impression that credits are being replenished to allow more play when, in fact, credits are steadily diminishing. *Games like Big Fish Casino are designed according to a algorithmic formula that has been honed for years, and that serves the purpose of extracting continuous value from customers.*
- Finally, Big Fish Games alleges that its games are not gambling because people can’t “cash out” their winnings during play. As a longtime researcher of slot machine technology and gambling addiction, I find this to be the *weakest* of the company’s arguments, for one key reason that often escapes legislators and the public: Namely, the fact that for regular players of slot machines and mobile games alike (and most certainly for addicts of those games), *winning money is not the point*; rather, the point is *continuing to play*.

Over years of interviewing gamblers, it became clear to me that regular gamblers are seeking exactly what the purveyors are offering: time on device, or as gamblers often call it “the machine zone.” The machine zone is a psychologically compelling

dissociative state in which players are suspended, as if out of time and space, free of worldly concerns and anxieties as long as they stay in motion and continue to play. To that end, players purchase credits to keep playing until they have none left; even winnings along the way are a means to that end. When regular casino slot machine players are interrupted before their credits have run out, they will typically keep those credits on their player cards, or on a paper ticket that the machine ejects, and will then return to play them another time.

*To emphasize: in the case of traditional slot machines, the act of cashing out is neither gamblers' intention nor game designers' intention; the game, played as intended by designers, means that it is played until credits have run dry—so that more will be purchased. Just as on mobile apps.*